IN THE CLAIMS:

Please amend claims 1, 3, 4, 5, 7, 11, 16, 27, 29, 31, and 33 as follows. Please cancel claims 2, 6, 8-10, 28, 30, 32, 39, 43, and 44 without prejudice.

1. (Currently Amended) A method of controlling a data packet flow in a buffer means of a network node of a data network, said method comprising the steps of:

(a) assigning a nominal capacity to each data flow; and

(b) shifting free capacity from a first flow portion to a second flow portion, when a new data packet of said second flow portion has been received at said buffer means and said nominal capacity has been exceeded;

wherein said nominal capacity is an upper buffer memory limit of a buffer memory of said buffer means shared between a plurality of channels allocated to respective packet data connections and determined in dependence on the number of allocated channels, and wherein memory space is shifted from said first channel to a second channel, when a new data packet of said second channel has been received and not enough memory space is available for said second channel,

wherein a channel with the longest packet queue is selected as said first channel, and a predetermined data packet is dropped from the queue of said first channel, when no free memory is available in said buffer memory,

wherein said dropping of said predetermined data packet is inhibited and said new data packet is dropped, if the queue of said second channel has reached said upper buffer memory limit,

wherein said channel with the longest packet queue is determined by an estimation, and

wherein said estimation is performed by storing the length and identity of the last determined longest queue, comparing the length of a current queue with said stored longest queue on a queuing event, and updating the length and identity of said stored longest queue according to the result of comparison.

2. (Canceled).

3. (Currently Amended) A method according to claim 1 ~~2~~, wherein said upper buffer memory limit is determined by dividing the total buffer memory capacity by the number of allocated channels.

4. (Currently Amended) A method according to claim 1 ~~2~~, wherein said second channel is a new channel set up for a new packet data connection.

5. (Currently Amended) A method according to claim 1 ~~2~~, wherein said second channel is a channel having reached its upper buffer memory limit.

6. (Canceled).

7. (Currently Amended) A method according to claim 1 ~~6~~, wherein said predetermined data packet is located at the front of the queue of said first

channel.

8. (Canceled).

9. (Canceled).

10. (Canceled).

11. (Currently Amended) A method according to claim 1 ~~10~~, wherein said buffer means is a Packet Data Convergence Protocol (PDCP) buffer.

12. (Previously Presented) A method according to claim 11, wherein said packet data connections are connections between mobile terminals (MT I - MTn) and Internet hosts (HiHn), or between mobile terminals.

13. (Original) A method according to claim 1, wherein said nominal capacity is a nominal flow rate at which data flow traffic is guaranteed.

14. (Original) A method according to claim 13, wherein said free capacity is a residual rate corresponding to the difference between said nominal flow rate and an instantaneous traffic rate of said first flow portion.

15. (Previously Presented) A method according to claim 14, further comprising the step of admitting a new data flow only if the nominal flow rate of said new data flow falls within the remaining system bandwidth.

16. (Currently Amended) A method ~~according to claim 15,~~ of controlling a data packet flow in a buffer means of a network node of a data network, said method comprising the steps of:

assigning a nominal capacity to each data flow;

shifting free capacity from a first flow portion to a second flow portion, when a new data packet of said second flow portion has been received at said buffer means and said nominal capacity has been exceeded; and

admitting a new data flow only if the nominal flow rate of said new data flow falls within the remaining system bandwidth,

wherein said nominal capacity is a nominal flow rate at which data flow traffic is guaranteed,

wherein said free capacity is a residual rate corresponding to the difference between said nominal flow rate and an instantaneous traffic rate of said first flow portion, and

wherein said remaining system bandwidth is decremented by said nominal flow rate if said new data flow is admitted.

17. (Previously Presented) A method according to claim 16, wherein said method is used in a QoS scheduling algorithm for scheduling concurrent user traffic.

18. (Original) A method according to claim 17, wherein said QoS scheduling algorithm is adapted to operate on a round basis, and wherein multiple

users can be served at one round and/or a user data flow can be served with more than one data packet at one round.

19. (Original) A method according to claim 18, wherein said round corresponds to one or more WCDMA radio frames or one or more EDGE TDMA frames.

20. (Previously Presented) A method according to claim 18, wherein said first and second flow portions belong to different data flows scheduled on the same round.

21. (Previously Presented) A method according to claim 18, wherein said first and second portions belong to the same data flow, and said first flow portion is scheduled on a round following the round of said second flow portion.

22. (Previously Presented) A method according to claim 18, wherein said first and second flow portions belong to different data flows, and said first flow portion is scheduled on a round following the round of said second flow portion.

23. (Previously Presented) A method according to claim 22, wherein said nominal flow rate is determined based on the following equation:

$NR_i = \alpha \times Cr_i$

wherein α denotes a fractional value defining a tradeoff between an overall packet loss ratio and a system throughout, NR_i denotes a nominal flow rate

assigned to a concerned user data flow i, and Cr_i denotes a contracted data rate for said concerned user data flow i.

24. (Previously Presented) A method according to claim 23, wherein an urgency factor is assigned to each data packet, and the target flow for said shift of said free capacity is determined based on said urgency factor.

25. (Previously Presented) A method according to claim 23, wherein an accumulated residual bandwidth is determined for each data flow, and the target flow for said shift of said free capacity is determined based on said accumulated residual bandwidth.

26. (Previously Presented) A method according to claim 25, wherein arriving data packets are segmented into data segments and scheduling is performed at the data segment level.

27. (Currently Amended) A network node for controlling a data packet flow in a buffer means of said network node, wherein said network node comprises flow control means for assigning a nominal capacity to each data flow, and for shifting free capacity from a first flow portion to a second flow portion when a new data packet of said second flow portion has been received at said buffer means and said nominal capacity has been exceeded, wherein said buffer means comprises a buffer memory shared between a plurality of channels

allocated to respective packet data connections, and said flow control means comprises buffer control means for determining an upper buffer memory limit for each channel in dependence on the number of allocated packet data connections and for controlling allocating means so as to shift memory space allocated to a first channel from said first channel to a second channel, when a new data packet of said second channel has been received and not enough memory space is available for said second channel, wherein said buffer control means is arranged to select a channel with the longest packet queue as said first channel and to control said allocating means so as to drop a predetermined data packet from the queue of said first channel when no free memory is available in said buffer memory, and wherein said buffer control means is arranged to estimate said channel with the longest packet queue by storing the length and identity of the last determined longest queue, to compare the length of a current queue with said stored longest queue on a queuing event, and to update the length and identity of said stored longest queue according to the result of comparison.

28. (Canceled).

29. (Currently Amended) A network node according to claim 27 ~~28~~, wherein said buffer control means is arranged to determine said upper memory limit by dividing the total buffer memory capacity by the number of allocated channels.

30. (Canceled).

31. (Currently Amended) A network node according to claim 27 ~~30~~, wherein said buffer control means is arranged to inhibit said dropping of said predetermined packet and to control said allocating means to drop said new data packet, if the queue of said second channel has reached said upper buffer memory limit.

32. (Canceled).

33. (Currently Amended) A network node according to claim 31 ~~32~~, wherein said buffer memory is a Packet Data Convergence Protocol (PDCP) buffer.

34. (Previously Presented) A network node according to claim 27, wherein said flow control means comprises scheduling means and said nominal capacity is a nominal flow rate at which data flow traffic is guaranteed in a QoS scheduling algorithm.

35. (Previously Presented) A network node according to claim 34, wherein said scheduling means comprises said buffer means.

36. (Previously Presented) A network node according to claim 35, wherein said network node is a radio network controller.

37. (Previously Presented) A method according to claim 3, wherein said second channel is a new channel set up for a new packet data connection.

38. (Previously Presented) A method according to claim 3, wherein said second channel is a channel having reached its upper buffer memory limit.

39. (Canceled).

40. (Previously Presented) A method according to claim 19, wherein said first and second flow portions belong to different data flows scheduled on the same round.

41. (Previously Presented) A method according to claim 19, wherein said first and second portions belong to the same data flow, and said first flow portion is scheduled on a round following the round of said second flow portion.

42. (Previously Presented) A method according to claim 19, wherein said first and second flow portions belong to different data flows, and said first flow portion is scheduled on a round following the round of said second flow portion.

43. (Canceled).

44. (Canceled).

Please add new claim 45 as follows:

45. (New) A network node according to claim 29, wherein said buffer control means is arranged to inhibit said dropping of said predetermined packet and to control said allocating means to drop said new data packet, if the queue of said second channel has reached said upper buffer memory limit.